

## Interim Agenda of the Professional Development Committee

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 Pennsylvania Department of Agriculture Bureau of Ride and Measurement Standards  
 Harrisburg, Pennsylvania

Reference  
 Key Number

### 400 INTRODUCTION

The Professional Development Committee (Committee) submits its Agenda for consideration by the National Conference on Weights and Measures (NCWM) at its 2005 Interim Meeting.

Table A identifies the agenda items in the Report by Reference Key Number, Item Title, and Page Number. The item numbers are those assigned in the Interim Meeting Agenda. A voting item is indicated with a “V” after the item number. An item marked with an “I” after the reference key number is an information item. An item marked with a “D” after the reference key number is a developing issue. The developing designation indicates an item has merit; however, the item was returned to the submitter for further development before any action can be taken at the national level. An item marked with a “W” was withdrawn by the Committee and generally will be referred to the regional weights and measures associations because it either needs additional development, analysis, and input or does not have sufficient Committee support to bring it before the NCWM.

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**Details of All Items  
(In Order by Reference Key Number)**

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**401 EDUCATION****401-1 I National Training Program**

**Source:** Board of Directors

The Board of Directors established the Professional Development Committee at the 2003 NCWM Annual Meeting in Sparks, Nevada. The first critical charge to the Committee was to represent the NCWM in the development of a national weights and measures professional development program in cooperation with our partners:

- State and local weights and measures departments;
- Private industry at all levels from manufacturer to repair service; and
- Technical advisors from NIST Weights and Measures Division and Measurement Canada

Its scope embraces all matters dealing with, but in priority:

1. The education and professional development of weights and measures officials and the promotion of uniformity and consistency in the application of weights and measures laws and regulations;
2. The education of industry personnel with regard to weights and measures laws and regulations, including all areas from device manufacturer to service technician;
3. Quality standards for weights and measures activities and programs; and
4. Safety awareness for weights and measures-related activities.
5. Another critical charge was to develop a firm partnership with the state and local weights and measures departments, private industry at all levels from manufacturer to repair service, and the National Conference on Weights and Measures. It is also critical that NIST Weights and Measures Division and Measurement Canada be full partners with the PDC in addition to providing technical advisors.

**Background:** In 2002 the Professional Development Committee (PDC) (formerly the Committee on Administration and Public Affairs) met with then Chairman Ross Andersen, who explained his vision for revising the National Training Program. Mr. Andersen's vision included a horizontal, hierarchical approach to training, filtering out the common elements of general information applicable to a wide range of devices and including the most detailed information in courses for specific devices. The Committee developed an outline for this new training approach and provided the NCWM membership with its draft at the 88<sup>th</sup> NCWM Annual Meeting in July 2003 (see Appendix A).

The PDC strongly supports the decision of the NCWM to create a National Training Program that will lead to a National Certification Program for weights and measures officials. The PDC recommends that the end product (National Certification Program) be determined first, so the curriculum can be developed to meet the needs of a certification program. To achieve this goal, the PDC must be allowed to do its work for the NCWM and maintain its focus to produce a National Certification Program.

At the 2004 Annual Meeting the NCWM voted in support of the development of shorter courses. At its Fall 2004 meeting the Northeast Weights and Measures Association (NEWMA) decided not to recommend the development of shorter courses.

**Discussion:** The training responsibility should fall directly on state and local jurisdictions. Administrator training should also be added to the curriculum. The PDC should consider looking outside the NCWM for training and structure. The Central Weights and Measures Association (CWMA) will assist the NCWM PDC in determining what the knowledge and prerequisites are for a beginning, intermediate, and advanced inspector as part of the National Training Program development. The Western Weights and Measures Association (WWMA) recommended that the PDC establish identifiable course outlines that would result in shorter training courses.

#### **401-2 I Professional Development**

**Source:** Board of Directors

Develop a consensus on the necessary and uniform steps in an educational process to raise the professional status of weights and measures and related industry officials throughout the United States.

**Discussion:** California offered its support and the training material used in that state. The PDC is currently using materials developed by W&M jurisdictions and private industries. Jurisdictions are encouraged to share training materials with the PDC. The PDC created and distributed an informational survey to collect data to help identify the needs of jurisdictions and to create a consensus position on the uniform steps to follow in the development of a National Training Program.

The CWMA agreed that NCWM PDC efforts to establish a training and certification program would be the first step in professional development. The NCWM PDC circulated a survey/questionnaire to the membership at the annual meeting to assess the training and professional development needs. Once the survey responses have been compiled the PDC will be able to focus on the areas of greatest need.

#### **401-3 I Identify Partners**

**Source:** Board of Directors

Identify appropriate roles for each of the partners (e.g., NCWM, state and local weights and measures departments, private industry at all levels from manufacturer to repair service, NIST Weights and Measures Division, and Measurement Canada) in implementing an educational process.

**Discussion:** The development of a training program should follow the steps below:

1. Study training programs of outside agencies, as well as those of state and local jurisdictions.
2. Establish knowledge goals for weights and measures officials and administrators.
3. Develop exams or tests.
4. Develop curriculum based upon the findings and results of the steps 1 - 3 above.

The PDC is in the process of gathering and studying training programs from outside agencies as well as those of state and local jurisdictions. Members and Associate members of the NCWM and some outside agencies have offered their assistance. It is important to recognize that all stakeholders must be partners. Once the focus projects are identified, the PDC will call upon our partners to establish focus or work groups.

The CWMA PDC is asking it's membership to start the process of establishing who our "experts" are for all aspects of weights and measures to expedite the establishment of work groups. Send the names and contact information to either Agatha Shields at [aashield@co.franklin.oh.us](mailto:aashield@co.franklin.oh.us) or Celeste Bennett at [bennettc9@michigan.gov](mailto:bennettc9@michigan.gov) via email.

#### **401-4 I Create a Curriculum Plan**

**Source:** Board of Directors

- (a) Develop and maintain a curriculum plan in cooperation with our partners that establishes uniform and consistent training objectives for weights and measures professionals in all fields and at all levels from novice to seasoned veteran.
- (b) The objectives should represent a consensus of our partners and should be organized by scope, sequence, and level of complexity to assist those developing the curriculum materials.

**Discussion:** The PDC will begin using working groups to develop courses that could be used as self-study or in classroom settings. The initial priority may be high profile devices (e.g., motor fuel dispensers and retail scales). Survey results may alter the Committee's priorities and plans. The CWMA commented that the PDC should draw upon other sources, both external and internal, for establishment of curriculums.

The WWMA recommends that the PDC review current training courses on the NIST website at <http://www.nist.gov/own> to establish and identify various levels of training (see 401-1). The PDC should review and update all existing NIST training courses and post them on the NIST website. The WWMA's Administration and Public Affairs Committee reported that it would initiate a review of the current edition of the course material on retail motor fuel dispensers for review at its 2005 meeting. The Northeast Weights and Measures Association (NEWMA) recommends that the PDC set standards for education that includes provisions for field tests.

#### **401-5 I Curriculum Coordination**

**Source:** Board of Directors

- (a) Coordinate the development of curriculum materials to be used in the delivery of training (i.e., testing guides, digital presentations, slide shows, lesson plans, etc.) using a variety of formats (e.g., from self-study to traditional instruction).
- (b) Consider creating a network of interested parties to establish priorities, share training resources, foster cooperation to reduce redundancy, and promote uniformity and consistency.

The PDC should consider curriculums from other sources to develop a National Training Program. The CWMA agreed that the PDC should draw upon several sources, both external and internal, for establishment of curriculums.

#### **401-6 I Training Innovations**

**Source:** Board of Directors

Gather and share information from trainers on highly effective techniques, visual aids, etc., that have been used to facilitate learning. The PDC will use as many resources as possible. The Committee reviewed the notes from the NIST sponsored administrators workshops held in Denver and Baltimore and plans to explore many of these ideas.

The CWMA PDC recommends that focus groups also be used to identify training innovations and that each group be assigned at least one person with teaching or training background to ensure that different learning styles are recognized and utilized in developing the final product.

#### **401-7 I Instructor Improvement**

**Source:** Board of Directors

Coordinate activities to improve the competence of instructors and the uniformity of delivery of the curriculum. The PDC agrees that an integral part of instructor improvement includes training on effective methods of instruction. The PDC thinks classroom training should be used for preparing instructors to teach others. Outside courses will also be considered. To be effective in training assistance the PDC recommends the NCWM should maintain a list of certified trainers.

The CWMA commented that this item is not as high a priority as other agenda items and should be looked at for its appropriateness in inclusion in the PDC agenda. If it is not an appropriate item for the PDC to address then consideration should be given to removing it from the agenda.

#### **401-8 I Certification**

**Source:** Board of Directors

Develop an NCWM certification program based on the curriculum plan with measurable levels of competency.

**Discussion:** Weights and measure officials must pass written examinations to receive certification. Certificates should be presented at the NCWM Annual Meeting to administrators and weights and measures officials who complete training classes and pass the course examination. Chairman Dennis Ehrhart expressed his support for certification and indicated

that NCWM Board of Directors would consider requests to fund training. The PDC is exploring certification of weights and measures officials as a means to demonstrate competency.

The WWMA recommends that the NCWM certify weights and measures officials for competency upon successful completion of training courses. The WWMA also recommended that the testing and certification of weights and measures inspectors be funded by inspector membership in the NCWM and training course fees. The WWMA also commented that training courses be combination of self-guided CD Rom-based classes as well as on-line classes.

The CWMA commented that there might be too many agenda items for the PDC to accomplish any of them effectively. The PDC should develop an action plan or give priority designations to the agenda items. Having an Action Plan or Strategic Plan for the Committee would be helpful in maintaining focus and vision despite committee changeover. CWMA believes the certification of inspectors is a high priority and should be the number one focus of the PDC.

To that end, the CWMA put together the following certification recommendation at the request of the PDC chairman. Once the certification program is in place then the other priorities can be addressed. The CWMA membership requested that this proposal be considered at the 2005 Interim Meeting. They also requested that the certification proposal be included in the body of the PDC agenda and not just tacked on as an addendum since addendums do not get the same attention as items within the report itself.

### **NCWM FULL CERTIFICATION PROPOSAL** **(Submitted by the Central Weights and Measures Association)**

NCWM strategic plan has established a 2006 target date for establishing a certification program for individuals and programs. The Professional Development committee has been charged with developing a NCWM certification program based on the curriculum plan with measurable levels of competency.

#### **Proposed Program:**

#### **NCWM Certificate of Competency**

#### **Introduction**

NCWM has successfully implemented a National Type Evaluation Program (NTEP) that issues a Certificate of Conformance for devices to ensure that devices conform to all applicable requirements. Many jurisdictions, associations and agencies have also established proven methods to verify the competency of their members or processes. The Central Weights and Measures Association has a exam for the registration of service personnel. The ISWM has a 900-question test for service personnel. Sanitarian registration is also based on testing. Certified Fraud Examiners must pass an exam for certification. A full NCWM certification program would draw upon the strengths of these programs and would incorporate the successes of the NTEP into a Certificate of Competency program for inspectors.

This plan establishes NCWM as the certifying authority that maintains full control by establishing who gives the tests, scoring the certification tests and issuing the certificates. This plan is the strongest for universal acceptance and value because it provides for national control measures to ensure that everyone is tested and scored in the same manner and has the same level of competency.

#### **Implementation**

**Step One:** The Board of Directors (Board) hire a Certificate of Competency Director (full time or part time) to work with PDC and oversee certification tasks (patterned after the role of the NTEP Director). The PDC is operating with a different chair each year. When working on long-term projects the committee will lack continuity and historical prospective from year to year as membership changes and the committee chair changes. When an outgoing chairperson leaves, it is difficult to track and maintain information that has been previously compiled by the committee. The Director would liaison between the PDC and the Board and would be directly accountable to the Board. A Certification Director would provide the working committee with continuity, accurate committee reports, provide technical guidance and have other designated responsibilities as designated in steps two through ten and as determined by the board.

**Step Two:** Establish direct, identifiable links for training related functions with all major jurisdictions, trade associations and weights and measures related federal agencies. Most agencies have established either formally or informally a person who is responsible or assumes responsibility when needed for training. In the absence of a designated trainer, every agency or organization has someone who is capable of training and at some point assumes this responsibility. Use these contacts as direct links to the PDC for dissemination of materials, development of test questions, development of working groups, certification templates, etc. Having a direct link will ensure that more jurisdictions are involved and there is a ready source for dissemination and gathering information, and a contact for gathering names for specialized workgroups. Having a name and address of someone directly involved in training will ensure reaching the correct person when sending out information or gathering information without having a busy director be the "middle man." The direct links can be used to divide and conquer large otherwise unmanageable tasks as identified in Steps Three through Ten.

*PDC responsibilities:* Solicit and gather the names and contact information for all potential direct links located within their regional area, confirm the direct link's acceptance to be a direct link and submit the information to the Certification Director. Chairman would be responsible for federal agency contacts.

*Certification Director responsibilities:* Maintain the database of Direct Link names and resources for the PDC. Send out requests for information to direct links and receive and compile information from direct links.

*Direct Link responsibilities:* Provide correct contact information and be willing to assist the PDC as designated in steps three through 10.

**Step Three:** Identify what the core competencies and knowledge requirements are for basic (beginning) and advanced (journey level) inspectors for a general W&M inspector, for specific devices and W&M disciplines as listed in the training outline already developed by the PDC. This can be facilitated using workgroups. They can build on existing job descriptions that identify what the prerequisites are for advancement within a specific job classification since many of these clearly delineate between entry and advanced level competencies and knowledge. Use the direct links as a resource to broaden the reach of the PDC when attempting to identify experts to establish the workgroups.

*Certification Director responsibilities:* Send out requests to direct links to identify specialists in devices and/or in W&M disciplines. Receive and compile information for PDC review and work group assignments. Once workgroups are established track progress and compile information submitted. Assist as necessary.

*PDC responsibilities:* Review the list of direct link and resource names and set up workgroups to work on tasks related to identifying core competencies and knowledge.

*Direct Link responsibilities:* Solicit and gather the names and contact information for all potential work group members within their jurisdiction or organization, confirm their acceptance to be on a work group (if selected) and submit the information to the NCWM Certification Director.

**Step Four:** Develop certification tests and field competency verification methods to test the core competencies and knowledge requirements as established in step three. Establish work groups that can utilize a secure area of the NCWM website to conduct their work without having costly meetings or conference calls. Request that each Direct Link submit questions to be used in development of the tests. This will establish a wide pool of potential questions for certification test. Use the ISWM 900-question model and others for "development," "recycling" and "updating" test questions. Each direct link that submitted the question would also be the designated source responsible for annual review and if necessary updating of the question they submitted. This will ensure that as handbook requirements change all questions will remain current. Reviewing only a few questions should not be overly burdensome on any one jurisdiction or organization.

*Certification Director responsibilities:* Maintain the list of questions and random method for printing the tests, see that the tests get printed, keep track of the annual reviews of questions and their updates to ensure this is done and only accurate, current questions are used in the tests

*PDC responsibilities:* Members will be assigned a workgroup to assist and of which to be a part of.

Direct Link responsibilities: *Submit questions for specific devices or disciplines as assigned. Conduct an annual review of the questions submitted to make sure they are still current and in agreement with conference documents.*

**Step Five:** Establish confidentially, testing and field verification protocol for the tests to ensure the integrity of the test and testing validity are maintained. This is crucial given the wide scope of testing and the need to offer testing in every state. The ISWM testing protocol and other successful testing procedures should be studied to build on current successes. The Certification Director will provide the test proctors with all materials and instructions necessary to monitor the proctor's documentation that the protocol was followed.

Certification Director responsibilities: *Work with PDC to set up guidelines and procedures for the tests.*

PDC responsibilities: *Work with Certification Director to set up guidelines and procedures for the tests.*

Direct Link responsibilities: *Assist as requested.*

**Step Six:** Establish test sites, proctors and cost for certification based upon the recommendations of the Certification Director. Do a careful review of all potential sites and proctors to maintain confidentiality of the test materials and have consistency of administering the tests. There might also be a possibility of conducting some testing via computer terminals with a sign on if there are controls in place to maintain integrity of the test and to positively verify applicant's identification.

Certification Director responsibilities: *Review submitted test sites and proctor names for potential use in giving the tests. Give recommendations to ensure that the membership needs are met in giving or offering the test. Determine cost of testing.*

PDC responsibilities: *Provide potential sites and names of potential proctors for review. Do final selection recommendations to the board.*

Direct Link responsibilities: *Provide potential sites and names of potential proctors for PDC review.*

**Step Seven:** Establish testing minimums for certification of every test. PDC and working groups for each device and discipline will determine the minimum test score for certification. Use acceptable guidelines already established by other agencies (i.e. must pass 75 % of the questions to be certified)

Certification Director responsibilities: *Scoring the tests after they have been taken.*

PDC responsibilities: *Assist as necessary.*

Direct Link responsibilities: *Assist as directed.*

**Step Eight:** Determine testing certification needs within each jurisdiction. Identify what tests are needed in which jurisdictions and when. Identify which are willing to sponsor testing or provide assistance in getting staff certified.

Certification Director responsibilities: *To be developed.*

PDC responsibilities: *To be developed.*

Direct Link responsibilities: *To be developed.*

**Step Nine:** Conduct testing. Certification Director will coordinate testing times and locations with proctors based upon requests for testing. Establish proctors in each state that has signed a Memorandum of Understanding and has agreed to give and monitor tests in accordance with established guidelines.

Certification Director responsibilities: *To be developed.*

PDC responsibilities: *To be developed.*

Direct Link responsibilities: To be developed.

**Step Ten:** Issue a NCWM Certificate of Competency to inspectors based upon demonstration of successful completion of the test and field verification, if required.

Certification Director responsibilities: The Certification Director will score, print, issue, track and monitor all Certificates of Competency issued to inspectors.

PDC responsibilities: To be developed.

Direct Link responsibilities: To be developed.

Full NCWM certification expected outcome: consistency of enforcement, uniformity, respect, integrity, and acceptance of end product. Inspectors will be able to compete in marketplace and be recognized as professionals in their field.

Additional considerations/issues that the PDC and/or Certification Director and/or BOD will need to address:

- Who signs the certificate?
- Certificate must clearly state the discipline in which the person is certified in (similar to an NTEP Certificate of Conformance). This will prevent an applicant from receiving a general certificate and passing it off as being for all devices or a sealer from using service person certificate to demonstrate competency.
- Should the device certificates be renewable every five years for a lesser fee (1/2 of original fee)? If the person seeking the renewal can demonstrate they are active in participating in the activity they are renewing then no recertification test would be necessary. If not have a recertification test the person must pass to demonstrate they possess the necessary knowledge to perform the device inspection. Alternative methods of recertification may be developed.
- Should there be recertification criteria for general certification? This might be based upon active or inactive work status of the inspector.
- Would the certification tests be available for everyone to take under a proctor condition regardless of their learning method or their employment or jurisdictional status or the membership in the NCWM? i.e. service companies could take the test and be certified? Individual inspectors could take the test and be certified even if their jurisdiction did not participate in the certification process as long as the test was taken in accordance with established guidelines?
- Would jurisdictions be allowed to charge for giving the test to cover the cost of administering the test?
- Couldn't the Certification Director also coordinate and/or conduct training seminars/workshops? The Certification Director could reasonably deliver a set number of workshops or tests in conjunction with conference activities (e.g., breakout sessions). This would give some states justification to submit and receive approval for attendance by more than one member since training activities are considered essential to state functions whereas Conference attendance might not be. This would have the added benefit of allowing inspectors to be certified by NCWM even if their jurisdiction didn't choose to participate in the testing.

Expected outcome: The Strategic Plan also calls for non-dues funding sources by 2006.

- What type of fee should be charged for the issuance of the certificates? Should it be sufficient to cover the conference cost or a little more? Every certification in the private sector has a fee associated with it. Typically \$150 for several certifications. It not only provides a source of revenue to cover issuance but also prevents applicants from continuing to take the test at will until they finally pass it. Applicants wait to take the test until they are ready if money must be expended every time they take the test.

- Should work be done to establish an NCWM national certification of service personnel? The Certification Director might be able to choose the test questions that apply to this knowledge factor and develop a certification program for service personnel.
- Should development of a Certification of Administrators also be worked on in conjunction with the BOD, a liaison from NIST WMD?
- Should the certificate have a picture I.D. similar to what is done for registration of service personnel? The person could submit their picture electronically or one could easily be taken if NCWM was administering the test.

The Certification Director would assume responsibilities for: meeting minutes, receiving and maintaining test questions, maintaining the database for certification of individuals and programs, collection and accountability of testing fees, scoring the tests, be responsible for maintaining the list of certified inspectors and tracking certification updates. Assist in developing a list of training courses and materials available. Be the focal point for states to submit training courses and training materials. Ensure proper formatting of documents to ensure the documents are clear and concise.

**Budget considerations:**

- A full time or part time salary expense commensurate with the area the position is located (location may not be a big issue since much of the work will be done by U.S. mail or at conference sites).
- Travel sufficient to attend NCWM Interim and Annual meetings.
- Supplies and Materials: Printing costs for tests, mailings, web page updates.
- Equipment: Optical scanner if this type of testing is done, computer, Internet access, etc.

**Revenue possibilities:**

- Initial basic certification fee (everyone must have).
- Fees for endorsements added to initial certification (a device type or activity fee) Service Person registration fees.
- Workshop fees.
- Study guides.
- Increased value in membership if a two-tier testing fee is used member fee vs. non-member fee.

**Revenue examples:**

- Application for registered sanitarian in Ohio is \$150, sanitarian-in-training is \$75 and reciprocity is \$150.
- Association of certified fraud examiner charges an exam application fee of \$250, but the fee is only \$150 if you also purchase the prep course training materials for \$715.
- The Certified Financial Planner Board of Standards, Inc. charges a \$595 examination fee.

**401-9 I NCWM Training**

**Source:** Western Weights and Measures Association (WWMA)

**Recommendation:** The WWMA recommended that the NCWM should establish and maintain a database of classroom training programs completed by individual weights and measures officials where the training used NCWM courses (or equivalent) and certified trainers. The NCWM should also issue certificates to individual weights and measures officials for course completion.

**Background:** The WWMA A&P Committee recognized the value of formal training for inspection staff and the credibility these programs provide. Some jurisdictions have formal licensing programs for weights and measures staff and rely on informal programs. The WWMA recognized that the NCWM is a logical entity to provide standardized training and accreditation programs.

**Discussion:** The PDC acknowledges the comments from WWMA. They will be taken under advisement during the formulation of this committee. The PDC would like to know if NIST will participate in the NCWM training and certification program and would like to see a NIST liaison added to the Committee. The PDC would like to maintain NIST involvement with the National Training Program. NIST reported they have and will continue to develop training materials that will be made available for use in a wide variety of training classes. The standards used to inspect devices are technical therefore the training and development of these standards requires a wide variety of technical expertise and the NEWMA feels there should be technical and administrative support for the PDC from NIST. The PDC will solicit partnerships with other interested parties.

## **402 PROGRAM MANAGEMENT**

### **402-1 I Voluntary Quality Assurance Assessment**

**Source:** Board of Directors

The Committee will continue to promote the development of quality programs through the Voluntary Quality Assurance Assessments (VQAA). The Committee would like to see more participation in the VQAA. The Committee discussed the use of the ISO/IEC/EN 17025 *“General Requirements for the Competence of Calibration and Testing Laboratories”* for state and local field enforcement programs. The Committee concluded that the ISO 17025 standard does not apply to state and local field enforcement programs and recommends that the NCWM develop its own certification standards for state and local field enforcement programs. The PDC encourages all member states to utilize the VQAA and provide information to the PDC. The assessments can be a valuable tool in determining training needs. The PDC noted that in 2003 several certificates were presented at the annual meeting but that no requests for review were received in 2004. The PDC would like to remind the membership that the VQAA forms and other information are available on the NCWM web site and that the results are confidential. The CWMA commented that it believes that jurisdictions interested in having the assessments made have already done so and that there is no interest among its membership in developing additional VQAAs.

### **402-2 I NCWM Associate Membership Scholarships**

**Source:** Board of Directors

If funding is available, oversee a system to evaluate applications and award scholarships. Provide a report on the scholarships awarded each year.

No funds were made available for scholarships for the calendar year 2003. Continued interest in scholarships has been expressed by state and local jurisdictions. Guidelines for the Associate Membership Committee (AMC) Scholarships can be found in NIST Special Publication 992 of 2003, Report of the 87th National Conference on Weights and Measures. The applications for AMC Scholarships were sent out within the timelines established in Publication 992 of 2003. They will be reviewed during the 2005 Interim Meeting.

The WWMA expressed appreciation to the AMC for their continued support of various NCWM needs and encourages the Associate Membership to fund future training scholarships if funds become available.

### **402-3 I Safety Awareness**

**Source:** Board of Directors

Continue work to identify safety issues in the weights and measure field. Coordinate activities to increase safety awareness.

**Recommendation:** This is an area where activities should be increased to promote safety awareness.

**Discussion:** Past-Chairman Dennis Ehrhart has explained that the Voluntary Quality Assurance Assessment program, the NCWM Associate Membership Scholarships, and Safety Awareness efforts were carryover items from the

Committee on Administration and Public Affairs but recommended that the PDC make training its highest priority. The PDC continues to encourage jurisdictions to send their safety reports and issues to their regional safety liaison, who in turn sends reports to Charles Gardner, the NCWM Safety Coordinator. The PDC would like reports published in the NCWM newsletter. Two safety reports were received from the Central Weights and Measures Association. The CWMA reported that a CD-Rom on safety produced for the U.S. Environmental Protection Agency would be made available for review by the PDC at the 2005 Interim Meeting.

#### **402-4 I Standard Categories of Weighing and Measuring Devices**

**Source:** Western Weights and Measures Association

**Recommendation:** See Appendix B

**Discussion:** The Western Weights and Measures Association (WWMA) Administration and Public Affairs (A&P) Committee recommends that standard categories of weighing and measuring devices be adopted to facilitate development of technical standards, inspector training, data collection, and program management.

**Background:** The final report of the *Survey of Inspection Statistics Collected by State Weights and Measures Programs [2002]* conducted during mid-2003 observed that the absence of standard categories for weighing and measuring devices was a serious obstacle to data collection. For example, weights and measures programs categorize scales by type, use, or capacity and capacity ranges often vary considerably. For example, retail motor-fuel dispensers are currently being counted either by dispenser, grade, or number of hoses or meters. The need for reliable weights and measures statistics is summarized in the conclusion of the final report as follows:

Accurate statistics would be helpful in many ways at both the state and national level. For instance, it is difficult to develop performance measures without statistics. Also, work plans require accurate and detailed statistics. In addition, budget, staffing, and other elements of each state program demand statistics on inspection workloads. Finally, neither individual states nor the NCWM will be able to estimate and advertise the value of the nation's weights and measures programs unless reliable statistics are available.

To correct this problem, the WWMA has developed *Standard Categories for Weighing and Measuring Devices* and recommends that standard categories for weighing and measuring devices be adopted in order to facilitate the development of technical standards, inspector training, inspection data collection, and weights and measures program management.

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Kenneth Deitzler, Pennsylvania, Chairman

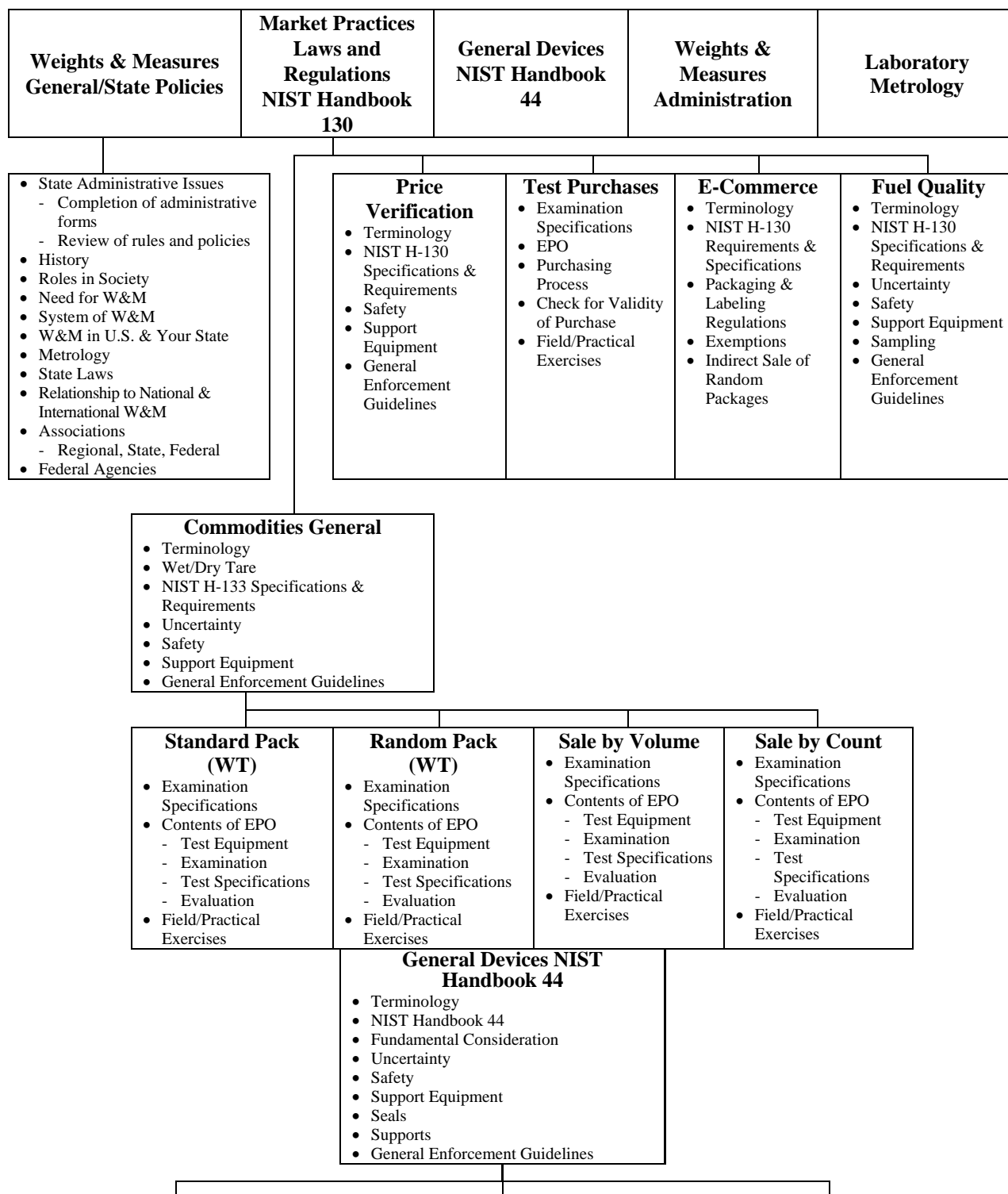
Celeste Bennett, Michigan  
Jerry Buendel, Washington  
Agatha Shields, Franklin County, Ohio  
Richard W. Wotthlie, Maryland

C. Gardner, Suffolk County, New York, Safety Liaison  
John Moore, Lore Consulting, Associate Membership Committee Representative

#### **Professional Development Committee**

## Appendix A

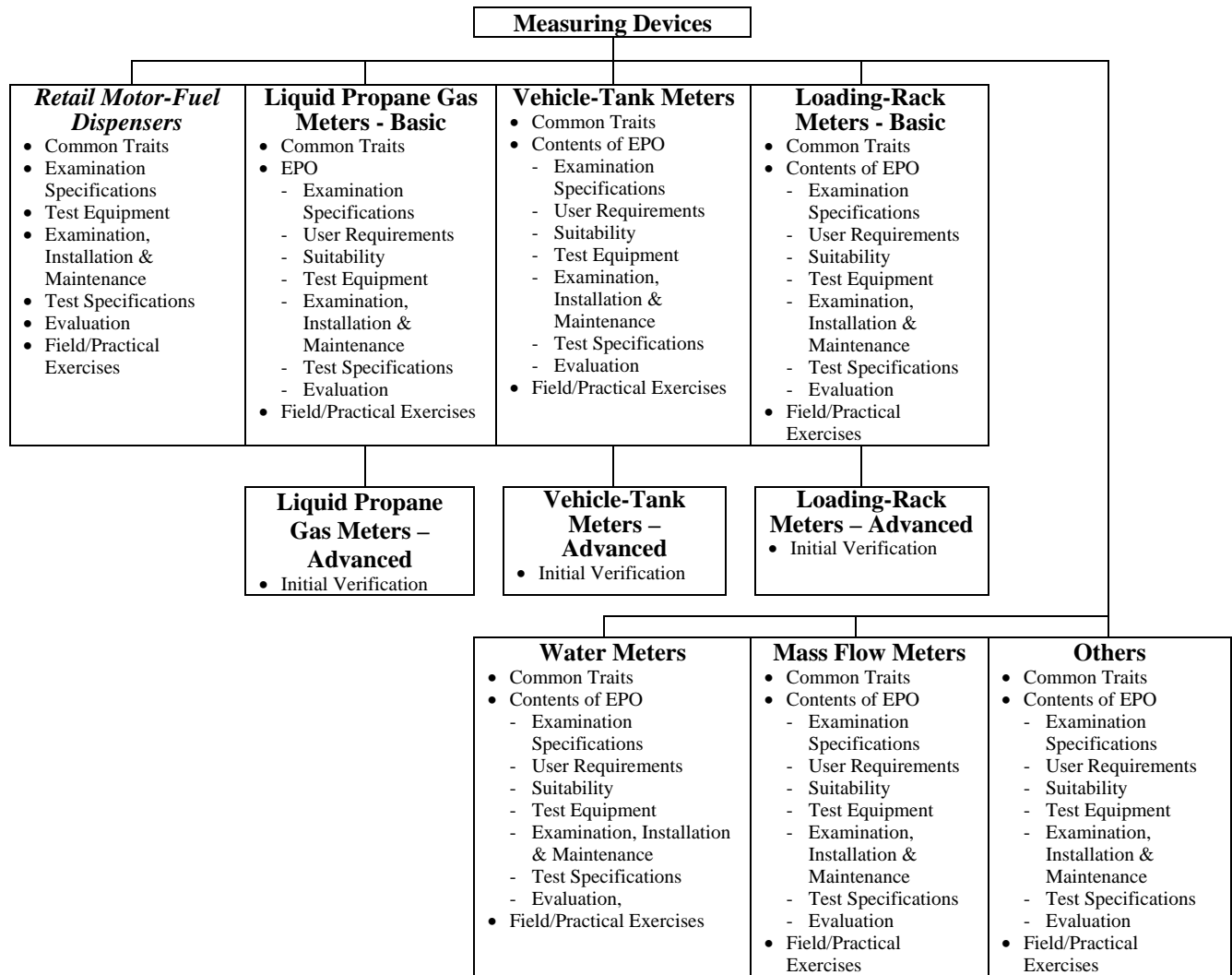
### National Training Curriculum Outline

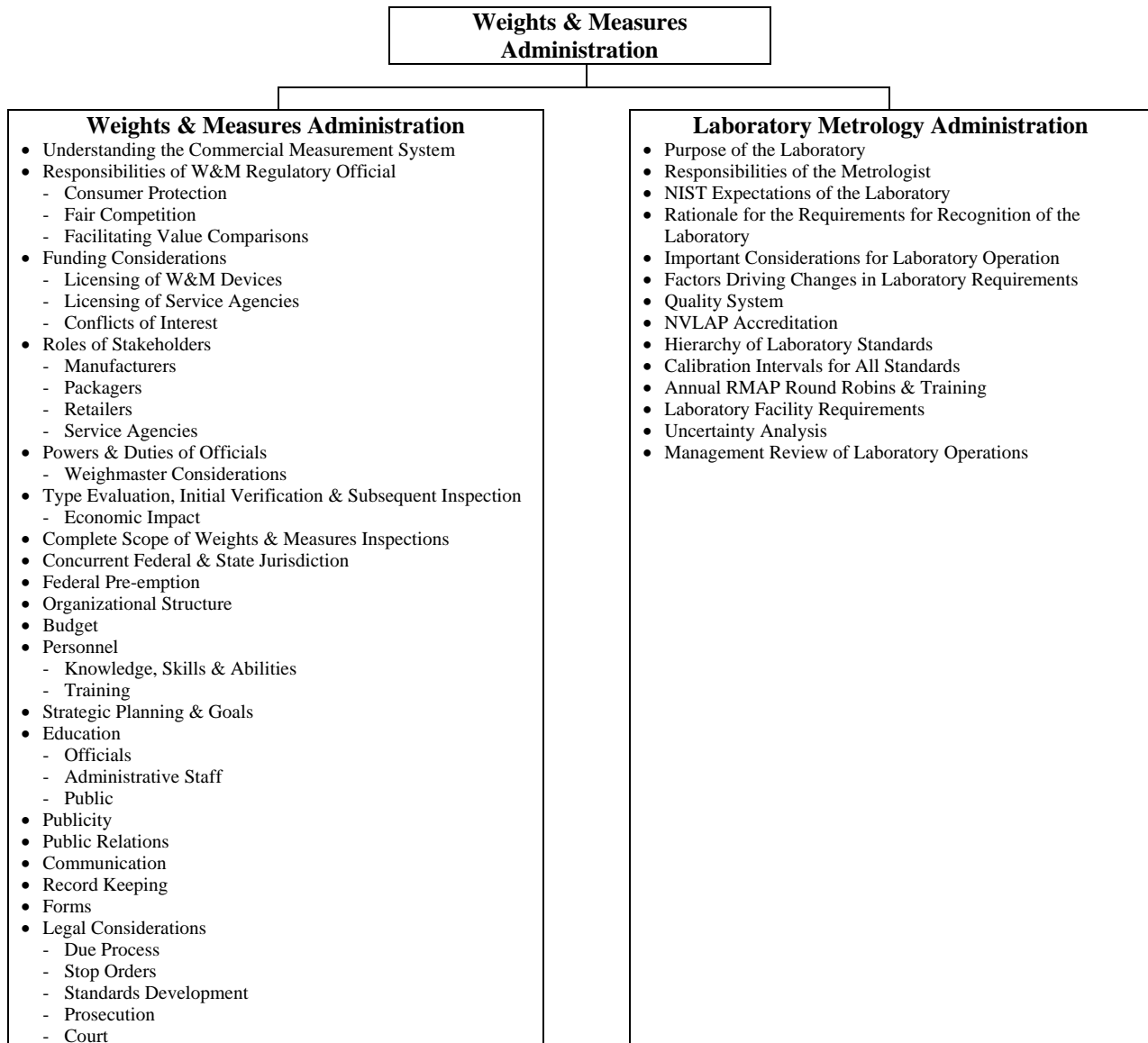


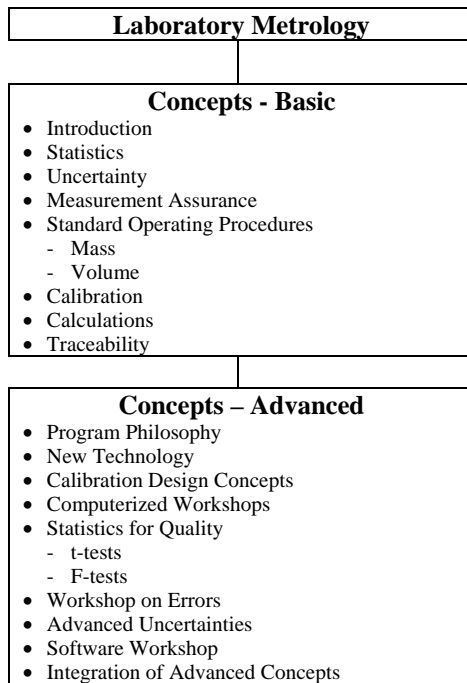
Weighing Devices	Measuring Devices	Other Devices
<ul style="list-style-type: none"> <li>• Terminology</li> <li>• Scale Types</li> <li>• Technology</li> <li>• Suitability</li> <li>• User Requirements</li> <li>• Operation/Markings</li> <li>• Scale Classes &amp; Tolerances</li> <li>• Basic Scale Test Procedures</li> <li>• Basic Inspection</li> </ul>	<ul style="list-style-type: none"> <li>• Terminology</li> <li>• Measuring Device Types</li> <li>• Technology</li> <li>• Suitability</li> <li>• User Requirements</li> <li>• Operation &amp; Markings</li> <li>• Tolerances for LMDs</li> <li>• Basic LMD Test</li> <li>• Basic LMD Inspections</li> </ul>	<ul style="list-style-type: none"> <li>• Terminology</li> <li>• Other Device Types</li> <li>• Technology</li> <li>• Suitability</li> <li>• User Requirements</li> <li>• Operation &amp; Markings</li> <li>• Tolerances for LMDs</li> <li>• Basic Test</li> <li>• Basic Inspections</li> </ul>

Retail Computing Scales	Platform Scales	Vehicle Scales	Railroad Track	Hopper
<ul style="list-style-type: none"> <li>• Common traits</li> <li>• Examination Specifications</li> <li>• Test Equipment</li> <li>• Examination, Installation, &amp; Maintenance</li> <li>• Test Specifications</li> <li>• Evaluation</li> <li>• Field/Practical Exercises</li> </ul>	<ul style="list-style-type: none"> <li>• Common traits</li> <li>• EPO <ul style="list-style-type: none"> <li>- Examination Specifications</li> <li>- User Requirements</li> <li>- Suitability</li> <li>- Test Equipment</li> </ul> </li> <li>• Examination, Installation, &amp; Maintenance <ul style="list-style-type: none"> <li>- Test Specifications</li> <li>- Evaluation</li> </ul> </li> <li>• Field/Practical Exercises</li> </ul>	<ul style="list-style-type: none"> <li>• Common traits</li> <li>• Contents of EPO <ul style="list-style-type: none"> <li>- Examination Specifications</li> <li>- User Requirements</li> <li>- Suitability</li> <li>- Test Equipment</li> </ul> </li> <li>• Examination, Installation, &amp; Maintenance <ul style="list-style-type: none"> <li>- Test Specifications</li> <li>- Evaluation</li> </ul> </li> <li>• Field/Practical Exercises</li> </ul> <p><b>Vehicle Scales Advanced</b></p> <ul style="list-style-type: none"> <li>• Initial Verification.</li> </ul>	<ul style="list-style-type: none"> <li>• Common traits</li> <li>• Contents of EPO <ul style="list-style-type: none"> <li>- Examination Specifications</li> <li>- User Requirements</li> <li>- Suitability</li> <li>- Test Equipment</li> </ul> </li> <li>• Examination, Installation, &amp; Maintenance <ul style="list-style-type: none"> <li>- Test Specifications</li> <li>- Evaluation</li> </ul> </li> <li>• Field/Practical Exercises</li> </ul>	<ul style="list-style-type: none"> <li>• Common traits</li> <li>• Contents of EPO <ul style="list-style-type: none"> <li>- Examination Specifications</li> <li>- User Requirements</li> <li>- Suitability</li> <li>- Test Equipment</li> </ul> </li> <li>• Examination, Installation, &amp; Maintenance <ul style="list-style-type: none"> <li>- Test Specifications</li> <li>- Evaluation</li> </ul> </li> <li>• Field/Practical Exercises</li> </ul>

Point-of-Sale Scales	Precision Scales Class I/II
<ul style="list-style-type: none"> <li>• Common traits</li> <li>• Examination Specifications</li> <li>• User Requirements</li> <li>• Suitability</li> <li>• Test Equipment</li> <li>• Examination, Installation, &amp; Maintenance</li> <li>• Test Specifications</li> <li>• Evaluation</li> <li>• Field/Practical Exercises</li> </ul>	<ul style="list-style-type: none"> <li>• Common traits</li> <li>• Examination Specifications</li> <li>• User Requirements</li> <li>• Suitability</li> <li>• Test Equipment</li> <li>• Examination, Installation, &amp; Maintenance</li> <li>• Test Specifications</li> <li>• Evaluation</li> <li>• Field/Practical Exercises</li> </ul>







## Appendix B

### Standard Categories of Weighing and Measuring Devices

The WWMA A&P Committee has drafted the following recommendation for consideration by the PDC. The standard categories of weighing and measuring devices are based on capacity ranges rather than type or use. It is assumed that the inspection test procedures for scales and meters within these capacity ranges are generally similar. Weights and measures programs can adopt the recommended standard categories without changing the manner in which they presently keep records of device inspections by simply adding an extra data field.

#### NCWM DEVICE CATEGORY CODES

DEVICE CODE	CATEGORY	CAPACITY	EXAMPLES
SP	Scale, Precision	< 5 g scale division	jewelry, prescription scales
SS	<u>S</u> cale, <u>S</u> mall	< 100 lbs.	retail computing scales
SM	<u>S</u> cale, <u>M</u> edium	100 – 5,000 lb	dormant, platform scales
SL	<u>S</u> cale, <u>L</u> arge	> 5,000 lb	livestock, recycler scales
SV	<u>S</u> cale, <u>V</u> ehicle	>40,00 lb	vehicle, railway track scales
MS	<u>M</u> eter, <u>S</u> mall	<30 gpm <sup>1</sup>	retail motor fuel dispensers
MM	<u>M</u> eter, <u>M</u> edium	30-100 gpm	loading rack, vehicle-tank meters
ML	<u>M</u> eter, <u>L</u> arge	>100 gpm	agri-chemical meters
MF	<u>M</u> eter, <u>M</u> ass Flow	All	heated tanks of corn syrup (soft drinks)
MW	<u>M</u> eter, <u>W</u> ater	All	water sub-meters for mobile homes & apartments
MG	<u>M</u> eter, <u>LPG</u>	All	propane sales
MT	<u>M</u> eter, <u>T</u> axi	All	Taximeters
DT	<u>D</u> evice, <u>T</u> iming	All	clocks in parking garages
DL	<u>D</u> evice, <u>L</u> ength Measuring	All	cordage meters

Two-letter device category codes could be employed to categorize devices in weights and measures jurisdictions for reporting to the NCWM during annual surveys. Otherwise, the data collection procedures already in place would be unaffected. It would be helpful also to add the two-letter device category code to inspection reports.

Other measuring devices [e.g., MFM, LPG, LMD, etc.] may not require capacity-based categories like scales or liquid measuring devices.

This briefing paper was provided by the WWMA to serve as a basis for further discussion and development of this item.

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<sup>1</sup> Retail motor-fuel dispenser counts should be based on meters except that mid-grades should be added for blenders.